



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,005	07/18/2003	Laura Kramer	200309793-1	4590

22879 7590 03/23/2005

HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER

KEEHAN, CHRISTOPHER M

ART UNIT	PAPER NUMBER
----------	--------------

1712

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/623,005	Applicant(s) KRAMER ET AL.	
	Examiner Christopher M. Keehan	Art Unit 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/18/03, 12/17/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

Claims 1-8, 11-15, 18-24 and 27 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13, 15, 16, 19-21, 23, 24, 26 and 27 of copending Application No. 10/623270. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons. The instant application claims a system for freeform fabrication and method thereof for forming a three dimensional object by inkjetting a reactive build material and separately inkjetting a curing agent, and adding colorants thereto. Copending application 10/623270 claims a system for freeform fabrication and method thereof for forming a three dimensional object by inkjetting a build material and separately inkjetting a radiation initiator, and adding colorants thereto. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have chosen an ultraviolet radiation initiator because an ultraviolet radiation initiator is a type of curing agent.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-7, 11-14, 18-23, and 27 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-32 of copending Application No. 11/035824. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following

Art Unit: 1712

reasons. The instant application claims a system for freeform fabrication and method thereof for forming a three dimensional object by inkjetting a reactive build material and separately inkjetting a curing agent, and adding colorants thereto. Copending application 11/035824 claims a system for freeform fabrication and method thereof for forming a three dimensional object, and the object produced, by inkjetting a build material and separately inkjetting a radiation initiator, and adding colorants thereto. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have chosen an ultraviolet radiation initiator because an ultraviolet radiation initiator is a type of curing agent.

Claims 1-7, 11-14, 18-23, and 27 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of copending Application No. 10/461022. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons. The instant application claims a method for forming a three dimensional object by dispensing a build material and dispensing another solution that can contain ink. Copending application 10/461022 claims a method for forming a three dimensional object by dispensing a build material and dispensing another solution that can contain ink. The subject matter of the copending application encompasses the instant claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-19 and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patel et al. (US 2004/0145088 A1). Regarding claims 1-7, 11, 13, 14, 18, 22 and 23, Patel et al. disclose a system for free-form fabrication of solid three-dimensional objects, a method thereof, and a three dimensional object produced, comprising applying a first composition (section 0024) including a reactive build material (section 0047) and inkjetting a second composition including a curing agent (section 0054) separately onto a substrate such that contact between the reactive build material and the curing agent occurs (sections 0049-0050), thereby resulting in a reaction that forms a solidifying composition, and repeating these steps to form a solid three dimensional object (section 0062). Patel et al. do not appear to specifically disclose inkjetting the first reactive material. Patel et al do disclose adjusting the viscosity of the first reactive material to a viscosity included in the range of the viscosity of the inkjetted curing agent (sections 0053-0054). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have inkjetted the first reactive material because Patel et al. teach that the first reactive material can have a viscosity that would enable inkjetting, and inkjetting would save time and produce a more controlled coating, resulting in a higher quality product.

Regarding claims 8-10, 15-17, and 24-26, Patel et al. disclose the instantly claimed reactive build materials (section 0047).

Regarding claims 12 and 19, Patel et al. disclose adding at least one colorant (section 0017).

Claims 20, 21, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patel et al. (US 2004/0145088 A1) in view of Russell et al. (6,375,874 B1). Patel et al., as applied above, are as set forth and incorporated herein. Patel et al. do not appear to specifically disclose a third and fourth inkjettable composition comprising the colors of cyan, magenta, and yellow. Russell et al. disclose a system and process comprising applying polymers by inkjet to produce a three-dimensional object, and that a typical inkjet printer is configured to deliver magenta, yellow, and cyan, so that when combined in various combinations and amounts, a variety of colors can be produced (col.11, lines 8-16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied the commonly used colors of magenta, cyan, and yellow, as taught by Russell et al. in the system and process of Patel et al. because Russell et al. teach that using magenta, cyan, and yellow as colorants in polymers for the production of three dimensional objects through inkjetting enables one to produce a variety of colors, resulting in a more versatile and higher quality product.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Keehan whose telephone number is (571) 272-1087. The examiner can normally be reached on Monday-Friday, from 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christopher Keehan

March 17, 2005

David J. Buttner
DAVID J. BUTTNER
PRIMARY EXAMINER

David Buttner